

ABSTRACT

The present invention provides a corrugating roll design for either a single facer or double facer that serves to prevent cutting of the fibers in a paper medium, thereby maintaining the required strength of the medium. A corrugating roll design for a corrugating machine comprises a pair of parallel, spaced apart, corrugating rolls which rotate in opposite directions on their respective rotational axes, the rotational axes of the corrugating rolls being spaced apart a predetermined distance, and each of the corrugating rolls being formed along its outer peripheral surface with longitudinally extending teeth with tooth tips and tooth roots, a paper medium to be corrugated adapted to be fed into a nip formed by the teeth of the corrugating rolls interengaging, and begin to be deformed as it moves into an actual corrugating impression zone in the nip where full engagement of the teeth takes place, thereby providing corrugations in the paper medium. Depressions are provided in the tops of the tooth tips of at least one of the corrugating rolls and spaced apart a predetermined distance along the length of the roll. Each of the depressions has a bottom surface which is located to establish a spacing between the bottom surface of the depression and the tooth root of the other corrugating roll at the actual corrugation impression zone in the nip, which spacing is greater than the thickness of the paper medium.